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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 09/965,423
Filing Date: September 27, 2001
Appellant(s): RIHAN ET AL.



Anna M. Budde
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 04, 2004.

***(1) Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

***(2) Related Appeals and Interferences***

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

***(3) Status of Claims***

This appeal involves claims 1-25.

***(4) Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

***(5) Summary of Invention***

The summary of invention contained in the brief is correct. However, Appellants' discussion of Declarations under 37 C.F.R. § 1.132 in the section "Summary of invention" does not appear to be relevant to the summary of invention.

***(6) Issues***

The appellant's statement of the issues in the brief is correct.

*(7) Grouping of Claims*

The rejection of claims 1-25 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

*(8) Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

*(9) Prior Art of Record*

| | | |
|---|---|---|
| 5,759,631 | Rink et al | 06-1998 |
| 5,716,678 | Rockrath et al | 01-1998 |
| WO 97/22646 | WO | 02-1997 |

*(10) Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-22 stand rejected under 35 U.S.C. 102 (b) as being anticipated by Rink et al. This rejection is set forth in a prior Office Action, mailed on 05/06/2004.

I. Claims 1-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by Rink et al (U.S. 5,759,631).

Rink discloses **a refinish clear coating composition** comprising

**(A) at least one** hydroxyl group-containing polyacrylate resin obtained by polymerizing

(a) from **5 to 80% by weight of a cycloaliphatic ester** of methacrylic acid and/or acrylic acid, or a mixture of such monomers,

(b) from **10 to 50% by weight of a hydroxyl group-containing alkyl ester of methacrylic acid and/or acrylic acid, or mixtures of such monomers,**

(c) from **0 to 25%** by weight of a **hydroxyl group-containing**, ethylenically unsaturated monomer, different from (a) and (b), or a mixture of such monomers, (reads on second hydroxy functional monomer)

(d) from 5 to 80% by weight of an aliphatic ester of methacrylic and/or acrylic acid, different from (a)-(c), or a mixture of such monomers,

(e) from 0 to 40% by weight of an aromatic vinyl hydrocarbon, different from (a)-(d), or a mixture of such monomers, and

(f) from 0 to 40% by weight of an additional ethylenically unsaturated monomer, different from (a)-(e), or a mixture of such monomers, and

(B) at least one crosslinking agent (curing agent). (see abstract).

With regard to the limitation of a second film-forming polymer (b) of the instant claims 1, 13 and 16, Rink teaches that the coating composition in addition may contain one or more **other hydroxyl group containing acrylate resins** (film forming polymer of the instant claims). Thus, limitations of the instant claims 1-3, 13, 16 are clearly met by Rink. These resins are different from the above described acrylate resin (A). (see col. 5, lines 52-57). This also reads on the limitations of the instant claim 4.

These resins are usually employed in the amount of 0-25% by weight based on the overall content of the coating composition, and based on the solids content of the binder (col. 5, lines 59-61). Examples of suitable film forming polymers (additional resins) are presented starting in col. 5, line 63 through col. 6, lines 1-41. The coating composition usually contains 15-45% by weight of acrylate resin. Thus the range of 15-45% is within the instantly claimed range of 5-60%, wherein both end points of the

reference range are within the instantly claimed range, and, therefore, the claimed range is anticipated.

The number average molecular weight is 1000 –**5000** (column 2, lines 20-25, col. 3, line 17, claim 1). This meets the limitations of the instant claims 1 and 16. With specific regard to claim 5, that is concerned with the weight average molecular weight, it is noted that the weight average is defined by the formula: Mw=Mn x polydispersity, which polydispersity is said to be lower than 5 (column 2, line 23), preferably from 1.8 to 4 (column 3, lines 16-20). Thus inherently Mw = 5,000x4 = 20,000, which satisfies the limitations of claim 5. The hydroxyl number of a polymer is 60-180 mg of KOH/g, (see col. 3, line 20), which meets the limitation of the instant claim 9.

Monomers (d) and (e) described in column 5, lines 25-43 meet the requirements of claim 10.

With specific regard to claims 18 and 19 Rink discloses that a coating composition employs crosslinking agent (B), which is selected from the group consisting of at least one **diisocyanate, polyisocyanate that contains isocyanurate** groups, and mixtures thereof. (see, for example, claim 11 of Rink).

With regard to the process of coating, as per instant claim 16 Rink discloses the process summarized in claim 12 of Rink in col.16, and this is the process of the instant claim 16. The clear coating composition of Rink is designed for VOLVO.

With regard to the limitation of the instant claims 11 and 12 on a viscosity expressed in Stokes it is a base presumption, that since the compositions of the instant claims and Rink are identical and are made by essentially the same method, the

properties even if not taught will be inherently the same. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore if the prior art teaches the identical chemical structure, the properties and characteristics applicant discloses and/or claims are necessarily present. ***In re Spada***, 911 F.2d 705,709,15 USPQ2d 1655,1658 (Fed. Cir. 1990). In other words since the claimed compositions **are not novel**, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

The method of refinishing substrate as per instant claims 16-22 is disclosed in Rink in col. 8, lines 30-61, and meets all the limitations of the instant claims in terms of methods steps and applied compositions.

Therefore all the limitations of the instant claims are either explicitly or inherently met by the disclosure of Rink.

II. Claims 16, and 22-25 stand rejected under 35 U.S.C. 103(a) as being anticipated by Rockrath et al (U.S. 5,716,678) in view of Rink.

Rockrath discloses a clear coating composition and method of a production of two-coat finish on a substrate, wherein a transparent coat composition containing a hydroxyl group-containing polyacrylate resin produced by polymerizing

**(a) 10 to 51%** by weight 4-hydroxy-n-butylacrylate or 4-hydroxy-n-butylmethacrylate or a mixture of 4-hydroxy-n-butylacrylate and 4-hydroxy-n-butylmethacrylate;

**(b) 0 to 36% by** weight of a hydroxyl group-containing ester of acrylic acid different from (a) or a hydroxyl group-containing ester of methacrylic acid or a mixture of such monomers;

**(c) 28 to 85%** by weight of an aliphatic **or cycloaliphatic ester** of methacrylic acid different from (a) and (b) with at least 4 C atoms in the alcohol residue or a mixture of such monomers;

(d) 0 to 3% by weight of an ethylenically unsaturated carboxylic acid or a mixture of ethylenically unsaturated carboxylic

acids and

(e) 0 to 20% by weight of an ethylenically unsaturated monomer different from (a), (b), (c) and (d) or a mixture

of such monomers, into a polyacrylate resin with a **hydroxyl number from 60 to 200** number average molecular weight from **1,500 to 10,000.**(abstract) and a curing component (B) (col.5, lines 17-22). Component (b) is described in column 4, lines 28-40. Method for refinishing substrates is disclosed in Rockrath in col.9, lines 40-50: Steel panels are ***spray-coated with a commercial, nonaqueous basecoat*** which contains aluminum pigment (reads on step (a) of the instant claim 16) are dried for 5 minutes at room temperature (reads on step (b) of the instant claim 16), and then are coated over with the ***transparent topcoats*** (dry film thickness 40-45 mu.m), described above. (this reads on step (c) of the instant claim 16). Therefore, the steps of the claimed process are expressly disclosed in Rockrath

Rockrath is ***silent*** about additional film forming polymer different from acrylate resin that is incorporated into transparent topcoat composition.

However, the intention to obtain transparent covering composition does require enhancement of film forming properties, and therefore, it is within the skill of those skilled in the art to add additional film forming polymer resin as taught by Rink for ***almost identical composition*** of Rockrath in order to enhance film forming properties of Rockrath' composition, and impart other desirable properties, such as adhesion, drying time, pot life, etc., and thus to arrive at the instantly claimed subject matter.

III. Claims 1-3, 5-21, 23-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/22646 in view of Rink.

WO'646 discloses clear coat refinish composition comprising a hydroxyl containing acrylic polymer present in the amount between 60-90% in a composition and a polyisocyanate crosslinking agent (abstract). The hydroxyfunctional polymer is described on page 5, lines 15-30, wherein the hydroxyfunctional monomer is preferably 4-hydroxy-n-butyl(meth)acrylate, and the cycloaliphatic acrylate comonomer is within the range of ***45-95% by weight and is preferably cyclohexyl methacrylate***. The acrylic solution polymer typically has a number average molecular weight of 1,000-30,000 (page 6, lines 23-26). Crosslinking agents are disclosed on page 6, lines 27-31). The process of refinishing substrate, which is preferably an automotive part is described in details on page 10, lines 6-30. Table 6 on page 19 presents the values of hydroxyl numbers that are within the claimed range for the majority of working examples.

Hydroxyl number is preferably 30-125 KOH/polymer (page 6, line 6). Acrylic polymer is typically present in the film-forming composition in an amount ranging from between about 60 to about 90 weight percent (page 4, lines 21-25).

WO'646 ***is silent about the additional film forming polymer different from acrylate resin.*** However, the intention to obtain transparent covering composition does require enhancement of film forming properties, and therefore, it is within the skill of those skilled in the art to add additional film forming polymer resin as taught by Rink for almost identical composition in order to enhance film forming properties and impart other desirable properties, such as adhesion, drying time, pot life, etc., and thus to arrive at the instantly claimed subject matter.

***(11) Response to Argument***

Appellants' arguments filed in Brief on October 4, 2004 have been fully considered but they are not persuasive.

***With regard to Rink reference*** the crux of Applicants' arguments appears to hinge on the statement that Rink's reference does not disclose the claimed amount of at least about 45% by weight of a cycloaliphatic monomer, based on the total weight of monomers copolymerized and having a number average molecular weight of at least about 5000 (see Brief, page 8, item I).

This is not persuasive because Rink does expressly disclose the range of 5-**80%** of cycloaliphatic monomer (see lines 4-6 of the abstract). The claimed range at least 45% means that from about ***45% to 100% is allowed by the instant claims***. Therefore, 80% expressly disclosed by Rink is a specific data point within the claimed

range. As stated in MPEP 2131.03 a specific data point is defined as either end point of the range or a disclosed data point of the reference. It has long been held that the disclosure in the prior art of any range within, overlapping or touching the claimed range, anticipates when the prior art range discloses the claimed range with sufficient specificity. In the instant case a person skilled in the art would have clearly envisaged the claimed "at least 45%" from the disclosed 10-80% range as per Rink.

With regard to Appellants' argument that a number average molecular weight of at least about 5000 is not disclosed by Rink, Appellants' attention is drawn to the disclosure of Rink, col. 2, line 21, col. 3, line 17, claim 1, col.15, line 23), wherein the value of number average molecular weight of 5000 is expressly disclosed. The claimed "at least ***about*** 5000" It is noted that the word **about** permits some tolerance. In ***re Ayers***, 154 F 2d 182, 69 USPQ 109 (CCPA 1946) ***at least about 10%*** was held ***anticipated*** by a teaching of a content not to exceed about 8%. Consult also ***In re Erickson***, 343 F 2d 778, 145 USPQ 207 (CCPA 1965). Therefore, both limitations of "at least about 45%.... And at least about 5000 of number average molecular weight..." are disclosed by Rink with sufficient specificity.

Appellants further argue that Rink patent discloses a polyacrylate resin that may have as little as 5 weight percent of cycloaliphatic methacrylate. The Rink patent provides no example of a resin including at least 45% by weight of a cycloallphatic monomer (see paragraph bridging pages 8 and 9 of Brief).

This is not persuasive because Rink does expressly disclose each and every limitation of the extremely broad limitations of the instant claims 1-4, 6-22. The range

claimed by Rink **5-80%**, incorporates and overlaps a very broadly claimed range at least 45%. In the instant case a person skilled in the art would have clearly envisaged the claimed "at least 45%" from the disclosed 10-80% range as per Rink.

The Declarations under 37 CFR 1.132 filed December 17, 2002 are insufficient to overcome the rejection based upon Rink as set forth in the last Office action because of at least three reasons:

- the evidence of the secondary considerations, such as unexpected or superior results, as Applicants try to show in is irrelevant to 35 USC 102 rejections and cannot overcome a rejection so based, ***In re Wiggins***, 488 F. 2d 538,543, 179 USPQ 421, 425 (CCPA 1973), consult MPEP 2131.04.
- even if *arguendo such* showing of unexpected results were relevant, then the example in the Declaration ***does not*** commensurate in scope with the instant claims. First of all the example 5 of Specification to which the Declaration refers, does not exist. Second, the example utilizes the resin (A) taken from Example 1 of the instant Application. **This Example 1 utilizes 69.7% !!!** of a cycloaliphatic acrylic monomer (calculated from Example data). The comparison is made with the only Example of Rink that utilizes 42% of such monomer. Since Applicants claim "at least about 45%", the compassion should have been made between the 42% of the reference and the CLOSEST POINT of the claimed range, i.e. 45%.
  The evidence presented, must be commensurate in scope with claims to which it pertains; evidence that is considerably narrower in scope than claimed subject matter, is not sufficient to rebut prima facie obviousness, consult ***In re Dill***, 202

USPQ 805 (CCPA 1979) 167 USPQ 681, see also ***In re Lindner***, 173 USPQ 356 (CCPA 1972).

- a **single data point** of 42 % taken from Rink's disclosure, as a preferred embodiment does not diminish the disclosed range of 5-80%.

Next Appellants' argument resides in contention that Rink's examples disclose 14-23% of t-butylcyclohexyl acrylate content and the polymers containing this amount of t-butylcyclohexyl acrylate show molecular weight from 2400 to 2700. In response to this, it is first note that Example E3 of Rink discloses 42%, and secondly, Appellants are reminded that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or non-preferred embodiments. ***In re Susi***, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including non-preferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998).

With regard to claims 11 and 12, the inherency of the viscosity property is addressed in the body of rejection.

Therefore, the claims 1-22 are anticipated by Rink.

***With regard to Rockrath*** reference that is used in 35 U.S.C. 1039a) rejection, Appellants arguments reside in contention that:

a) Rockrath patent, which is directed to high bake original finish compositions, would not suggest to one of ordinary skill in the art how to obtain the unexpected advantages of Appellants' invention in a refinish coating composition, refinish multi-component composition, or refinish method (see page 10 of Brief).

b) Rockrath does not suggest using at least 45% by weight of cycloaliphatic monomer, and does not suggest including a film forming polymer in addition to a hydroxyl-functional acrylic polymer.

With regard to argument (a), it is not found persuasive, because the composition of Rockrath is transparent (clearcoat), and is coated on top of basecoat (or finish) composition, and, therefore, the composition of Rockrath is a refinish composition.
It is noted that a reference anticipates a claim, if it discloses the claimed invention such that a skilled artisan could take this teaching in combination with his own knowledge of the particular art and be in possession of the invention, as per ***In re Graves***, 36 USPQ 2d 1697 (Fed. Cir. 1995), or ***In re Sasse***, 207 USPQ 107 (CCPA 1980).
And furthermore, the disclosure in a reference must show the claimed elements arranged as in the claim, which is fulfilled in the instant case, but need not be in identical words as used in the claim to be anticipatory. ***In re Bond***, 15 USPQ 2d 1566 (Fed. Cir. 1990).

With regard to argument (b) see line 10 of the abstract, wherein **(c) 28 to 85%** by weight of an aliphatic **or cycloaliphatic ester** of methacrylic acid different from (a)

and (b) with at least 4 C atoms in the alcohol residue or a mixture of such monomers is disclosed. With regard to the addition of second film-forming polymer, for which the secondary reference to Rink has been applied, the crux of Appellants arguments is that such "invitation" to combine references comes not from the references, but from the Examiner (see page 12 of Brief). This is not found persuasive, because transparent topcoat composition of Rockrath require the formation of a FILM with the thickness of 40-45 micron (see col.9, lines 45, 46), and therefore ***motivates*** those skilled in the art to use any aids in enhancing the film forming properties in order to obtain this thin and homogeneous layer of coating. Second the motivation was found in the identity of the major component (A) of Rink's and Rockrath's compositions. And thirdly, the motivation is derived from the knowledge of those skilled in the art. the In the instant case the motivation to combine references comes from "three sources": the nature of the problem to be solved (essentially the same in both references and in the claimed invention) , the teaching of the prior art (see discussion of both references) and the knowledge of persons of ordinary skill in the art", as per ***In re Rouffet***, 149 F3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

With regard to the curing temperature, which Appellants allege to be in Rockrath 130-140°C, it is the Examiner's position that the arguments are more specific than the claims, because the curing temperature is not recited in the instant claims.
Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See ***In re Van Geuns***, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicants are further reminded that the identity

required for anticipation is between the claimed subject matter and the subject matter disclosed by the reference; identity does not require the reference to disclose the same subject matter as described in the specification. See ***Kalman vs. Kimberly Clark Corp***. 218 USPQ 781 (Fed. Cir.1983)

With regard to ***WO 97/22646 reference,*** Appellants argue that WO'646 does not teach the composition or method of refinishing substrate.

The same rationale, as used in discussion of Rockrath applies to Applicants arguments with regard to the WO'646 reference. Applicant's attention is drawn to the entire page 10 and lines 1-10 of page 11, wherein such method is described. With regard to curing temperature, that is disclosed in WO'646 on page 11, which is higher that the curing temperature required for the instantly claimed composition, as argued by Appellants, it is noted that first of all neither curing step, not curing temperature are recited in the instant composition or process claims. Second, the WO'646 teaches that if needed the curing temperature can be lower that 160F (71°C) (see lines 5, 6 on page 11). And what is the most important is that the only numerical example of baking (curing) temperature in the instant specification recites the baking temperature of 160F (71°C) (see [0044] on page 19 of the instant specification.

With regard to the argument that there is no motivation to combine the WO'646 reference with Rink, Appellants rationale is incorporated from previous argument on the Rockrath reference in combination with Rink. Analogously, Examiner's rebuttal on this subject is incorporated from previous discussion in its entirety.

In response to Appellants' argument that the composition of WO'646 is entirely made from an acrylic solution polymer and polyisocyanate cross-linking agent, and therefore does not allow any other ingredients, such as film forming polymer, Appellants attention is drawn to lines 11-16 of page 8, ***wherein up to 25% by weight*** of other ingredients, such as plasticizers, flow controllers and other additives are included in the compositions. Hydroxyfunctional acrylate polymers are well known plasticizers, such as, for example, G-CURE 868 of Rohm & Haas Company, Philadelphia, PA. Therefore the presence of another hydroxyfunctional acrylate polymer is not only suggested, but **is** disclosed in WO'646.

It is believed that all Appellants' arguments have been addressed.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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***

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